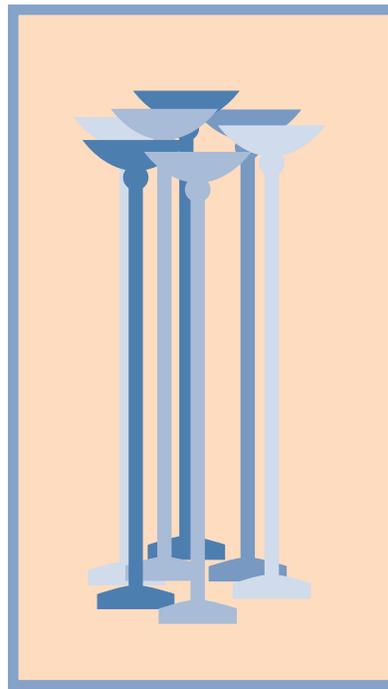


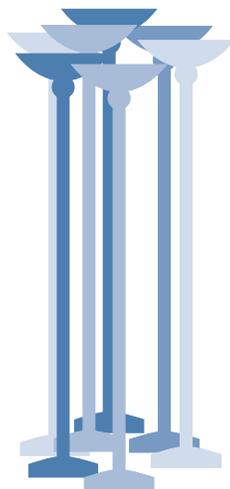
Energy-Efficient Torchiere Swap Guide



How to Conduct a Torchiere Implementation Program



Federal Energy Management Program



While this section offers a series of steps to facilitate torchiere programs, housing organizations within the military may vary, with specific needs and goals. The following steps are a guide that may be modified to match your situation.

Torchiere Implementation Program Basic Steps

- 1. Survey site**
- 2. Develop a concept plan**
- 3. Identify your budget**
- 4. Implementation method**
- 5. CFL torchiere systems**
- 6. Educate and inform participants**
- 7. Swap-out event**



1. Survey Site

To decide if a torchiere program is necessary in your community, take a preliminary survey to find out how many halogen torchieres are present. This survey can be as simple as one question: Do you use halogen torchieres in your home?

Optional Preliminary Research

The purpose of preliminary research is to gain an understanding of your residents' lighting preferences and determine how many people own halogen torchieres. A sample interview is included in the program folder and is available at <http://www.eren.doe.gov/femp> (Follow Products, Technologies, and Success Stories link to New Technology Demonstration Program section-- "Other Publications.")

There are several ways in which you can get this information including:

- door-to-door interviews
- phone interviews
- written surveys
- site visits
- walk-throughs

After obtaining your survey results, assess the degree of the fire hazard and energy consumption problems. Decide if a torchiere implementation program would be worthwhile. The fire risk from halogen torchieres is directly related to the number of lamps and the number of hours they are operated. Any halogen lamp left on more than 20 minutes gets hot enough to potentially catch cloth (curtains) and paper in the near vicinity on fire.

Compare the potential annual savings to the price of purchasing CFL torchieres for your community, \$30 to \$100 per torchiere. If the energy savings in dollars is greater than one quarter of the capital cost of buying new CFL torchieres, your payback period is less than four years. You will be making money after four years by using your CFLs. Remember this savings does not include your decrease in liability from reducing your fire hazard.

2. Develop a Concept Plan

- a. Set your program goals.
- b. Justify your budget based on the number of torchieres found in your site survey
- c. Look for partners on your military base and in your area that may be willing to help promote the swap-out:
 - Fire Department
 - Utility District
 - Risk management
 - Environmental groups
 - Community service groups
 - Command or Administration

3. Identify Your Budget

Find out how much and where the money to fund your torchiere implementation program is coming from.

Funding Options

While implementing energy-efficient light sources will save money in the long run, all military bases may not have available funds to pay the initial capital costs. There are funding options available for this purpose. Often, there are outside organizations that will benefit from your energy savings, such as:

Energy Service Companies (ESCOs) are private companies that profit from large-scale energy savings. The organization conducting the retrofit starts saving money right after the efficient lighting is installed because the ESCO assumes the capital costs. You can find a list of ESCOs on the National Association of Energy System Companies' website, www.NAESCO.org

Municipal Utility Districts may be interested in reducing your energy load, especially if you are a large consumer. Contact your municipal utility directly to find out if they offer energy-efficiency funding. Occasionally utilities provide a wholesale rebate for CFL torchieres. Sometimes utilities offer an additional rebate of \$5 to \$10 to those consumers who trade in their halogen fixtures.

Partner with the Community to Reduce Costs.

A large swap event is much less costly than several small events. Military housing communities have the potential to partner with civilian

communities to reduce advertising, demonstration, and many capital costs of putting on the event. Furthermore, a large event will draw more attention than small events and may accelerate subsequent retail sales of CFL torchieres.

Torchiere Money Savings Calculator

To estimate the financial savings from reducing your energy load, follow these steps:

1. Enter the existing number of halogen torchieres in your community _____
2. _____ \$30
3. Multiply *line 1* x *line 2* to get your final dollar savings: _____

Assumptions: annual savings for switching from halogen to CFL torchiere = 300kWH, energy cost = \$0.10/kWH

You can also go to <http://lighting.lbl.gov/projects/torchiere/torchmain.html> and click on "how much do your torchieres cost" to calculate individual financial savings on Lawrence Berkeley National Lab's website.

4. Implementation Method

After your preliminary research is complete, you have the information to decide on an implementation method. Both of the following methods have been done by institutions in conjunction with an outright ban on halogen torchieres. Often, these institutions find it necessary to provide an alternative for their ban to be successful. In the past, the following implementation methods have been successful:

Swap-out program: Residents bring their halogen torchieres to be recycled and exchange them for new CFL torchieres. You can either charge a discounted price for the new CFL torchieres, or give them to residents who trade in their halogens, free of charge.



Torchieres line the hallway for a CFL torchiere swap program.



CFL torchiere lights up a Stanford dorm room after a swap program.

- **Advantages:** Residents are more likely to take care of the torchieres and use them properly if they own them. No management maintenance is required. There is more of an educational opportunity with swap-outs because there is an actual event with posters and energy information where residents exchange their torchieres.
- **Disadvantages:** Swap-outs need to be a periodic event to save the most energy because residents take their torchieres with them when they move out.

Torchiere as a furniture item: A CFL torchiere is installed as a piece of furniture and belongs to the management. When the resident moves out they do not take the torchiere with them. This type of program works best for organizations that furnish housing units (dorms, etc.).

- **Advantages:** *This option is guaranteed to achieve 100% participation. In addition, there is only one purchase for housing management. Residents leave the torchieres when they move out, in the same way that they leave other furniture. This also means that the energy savings is persistent.*
- **Disadvantages:** *When the lights burn out or if the fixtures break, management has to replace them. This method may have a higher initial cost because management has to buy new CFL torchieres for all units instead of just the units that already have halogens.*

5. CFL Torchiere Systems

There are a variety of CFL torchieres available in various styles and colors. While offering a wide variety makes the logistics complicated, more people are likely to participate if they have more options to choose from. Refer to Appendix A for a list of manufacturers and torchiere models. The main characteristics to consider in your purchase are:

Total lumen output: Total lumen output describes the brightness of the lamp. Your necessary total lumen output depends on your resident preferences. In general, people prefer the option of brighter light up to 3,000 lumens.

Color and style: CFL torchieres come in a variety of styles and colors. You can order a catalogue or find pictures on the internet from the manufacturer list in Appendix A.



This image displays a variety of CFL torchieres that are currently available to buy.

Dimming capabilities: Some lamps dim smoothly from high to low lighting levels, some have two or three pre-programmed light levels, and others operate only at full output.

Manufacturer convenience: Your manufacturer should be easily accessible. Certain manufacturers carry models in hardware or office stores, others may have delivery options. Choose one that is most convenient.

Warranty: Make sure your torchieres come with a warranty and a good return policy in case you are sent defective fixtures or you have extras at the end of your program.

Cost: Prices range from \$30 to \$100 depending on style, quality, and function capabilities.

For a detailed list of CFL torchiere manufactures and models, see Appendix A in the back of this booklet.

6. Educate and Inform Participants

The goals of this phase are to inform residents about the upcoming program and encourage them to participate.

The information that you convey can be presented in several ways. You can pass out a series of informational handouts (see separate handout), put advertisements on the local radio station and in the newspaper, or even combine the educational part of your program with another activity, such as Earth Day or Arbor Day celebrations.

Include topics such as:

- a) financial savings
- b) environmental benefits of energy efficiency
- c) safety benefits of CFL torchieres
- d) details of the CFL torchieres that will be available (color, special functions)
- e) logistics of your program; what participants need to do
- f) where to buy more CFL torchieres if they miss the event or would like to purchase more in the future. Swap-outs often drive subsequent sales of CFL torchieres. This could make your program even more successful without much effort.

Sample informational handouts are included in the program folder and can be downloaded from <http://www.eren.doe.gov/femp> (Follow Products, Technologies, and Success Stories link to New Technology Demonstration Program section-- "Other Publications.")

7. Swap-out Event

The purpose of the swap-out or sales event is to hand out CFL torchieres and to collect unsafe halogens. The event can be at a table where residents stand in line to get their new torchieres, or it can be a delivery service where housing management delivers the lamps to each household. It can happen during one afternoon, or through an office for an extended period (a week or a month). The advantage of having a swap-out table, either at a community event or on its own, is that people will see their neighbors swapping their lamps and realize that they would like to participate as well. While this takes more planning and preparation, an “event” is a good way to do many swaps at one time instead of more time consuming one-to-one installations.

Follow-up Survey

A few months after the swap-out event, some organizations administer a follow-up survey. The survey is used to see if residents are satisfied with their CFL torchieres, and to gain input for future swap-outs. If you received funding from outside sources, they may be interested in the success of the program.

Some sample follow-up survey questions:

- Are you still using your CFL torchiere?
- Are you satisfied with it?
- How would you rate the swap-out event?
- Would you be willing to buy another energy-efficient torchiere or tell a friend about them?
- How would you rate the overall lighting quality?

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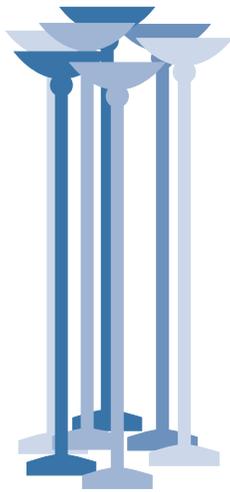
Appendix A: Manufacturer's List for CFL

Torchieres

Manufacturer Name	Brand Name	Model
Emess Lighting	Emess	DI273BL DI273WH
Energy Federation Inc.	EFI	CFT1x32w CFT1x40w CFT2x26w CFT3x26w
GE Home Electric Prod., Inc.	GE	40428 40431 40432 40433 40434 40671 41333 41333 41335 41332
GFL Lighting Incorporated	GFL	CFT2x26w CFT3x26w CFT78w CFT90w
Good Earth Lighting, Inc.	Good Earth/ Glencoe Torchiere	G6555-AB-I G6555-NK-I G6565-GR-I G6543-BK-I G6543-WH-I
Lights of America	Lights of America	1050 1051 1052 1053
Technical Consumer Prod.	T C P	53055BK/HP 53055WH/HP

Manufacturer	Telephone Number	Website
Emess Lighting	724-758-0707	www.alsyighting.com
Energy Federation Inc.	1-800-876-0660	www.EFI.org
GE Home Electric Prod.	1-800-327-0533	www.GE.com
GFL Lighting Inc.		www.GFLLighting.com/index.html
Good Earth Lighting	1-800-291-8838	www.general@gdearth.com
Lights of America	1-800-321-8100 x222	www.Lightsofamerica.com
Technical Consumer Prod.	1-800-324-1496	www.springlamp.com

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Log on to FEMP's New Technology Demonstration Program Web site

<http://www.eren.doe.gov/femp/prodtech/newtechdemo.html>

You will find links to:

- An overview of the New Technology Demonstration Program
- Information of the program's technology demonstrations
- Downloadable versions of program publications in Adobe Portable Document Formats (PDF)
- A list of new technology projects underway
- Electronic access to the program's regular mailing list for new products when they become available
- How Federal agencies may submit requests for the program to assess new and emerging technologies



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